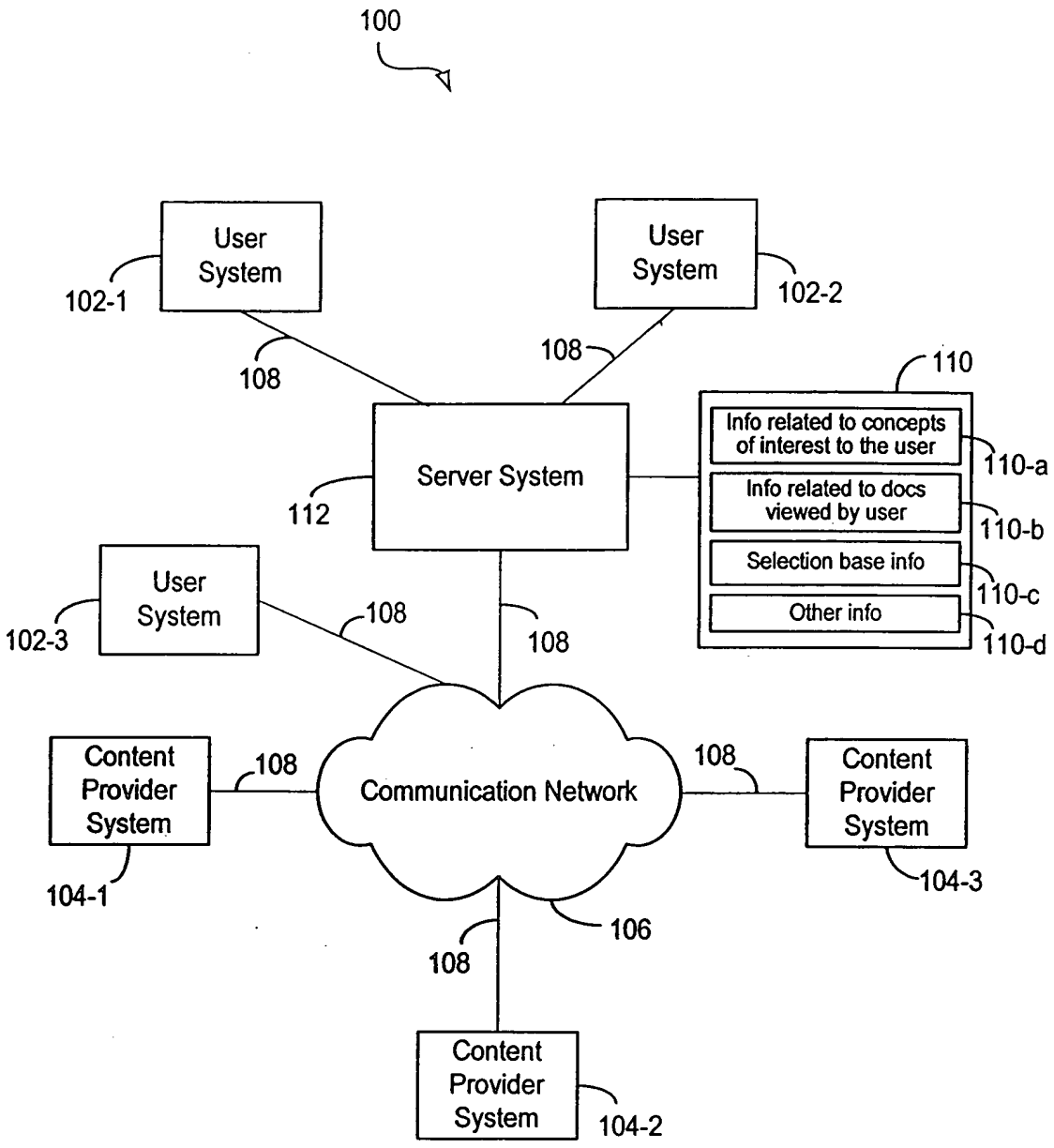

100
User System
102-1
User System
102-2
108
108
110
Info related to concepts of interest to the user
110-a
Info related to docs viewed by user
110-b
Selection base info
110-c
Other info
110-d
Server System
112
User System
102-3
108
108
Content Provider System
104-1
108
Communication Network
108
Content Provider System
104-3
106
108
Content Provider System
104-2

Fig. 1

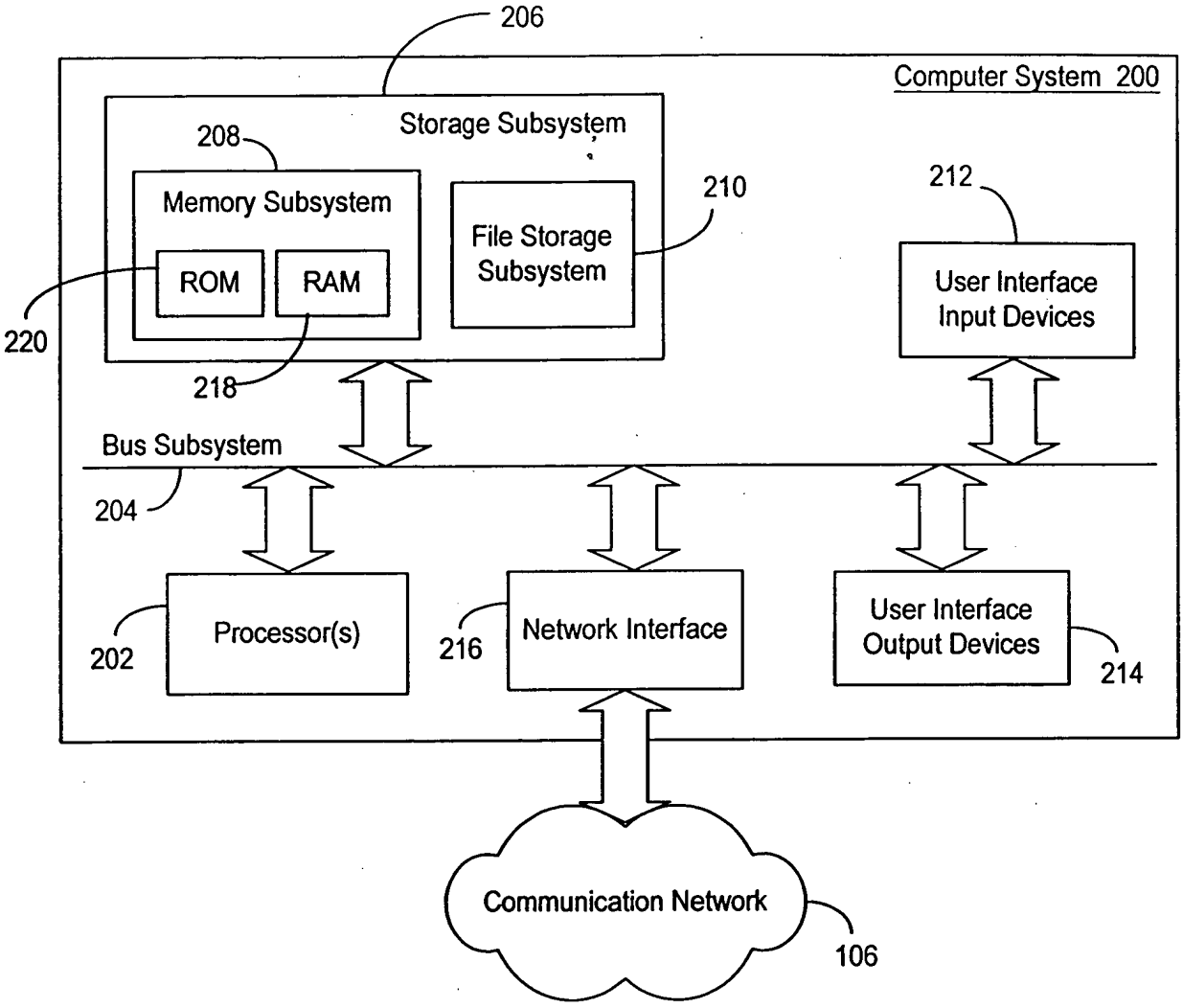

206
Computer System 200
Storage Subsystem
208
Memory Subsystem
ROM
RAM
220
218
File Storage Subsystem
210
212
User Interface Input Devices
Bus Subsystem
204
202
Processor(s)
216
Network Interface
User Interface Output Devices
214
Communication Network
106

Fig. 2

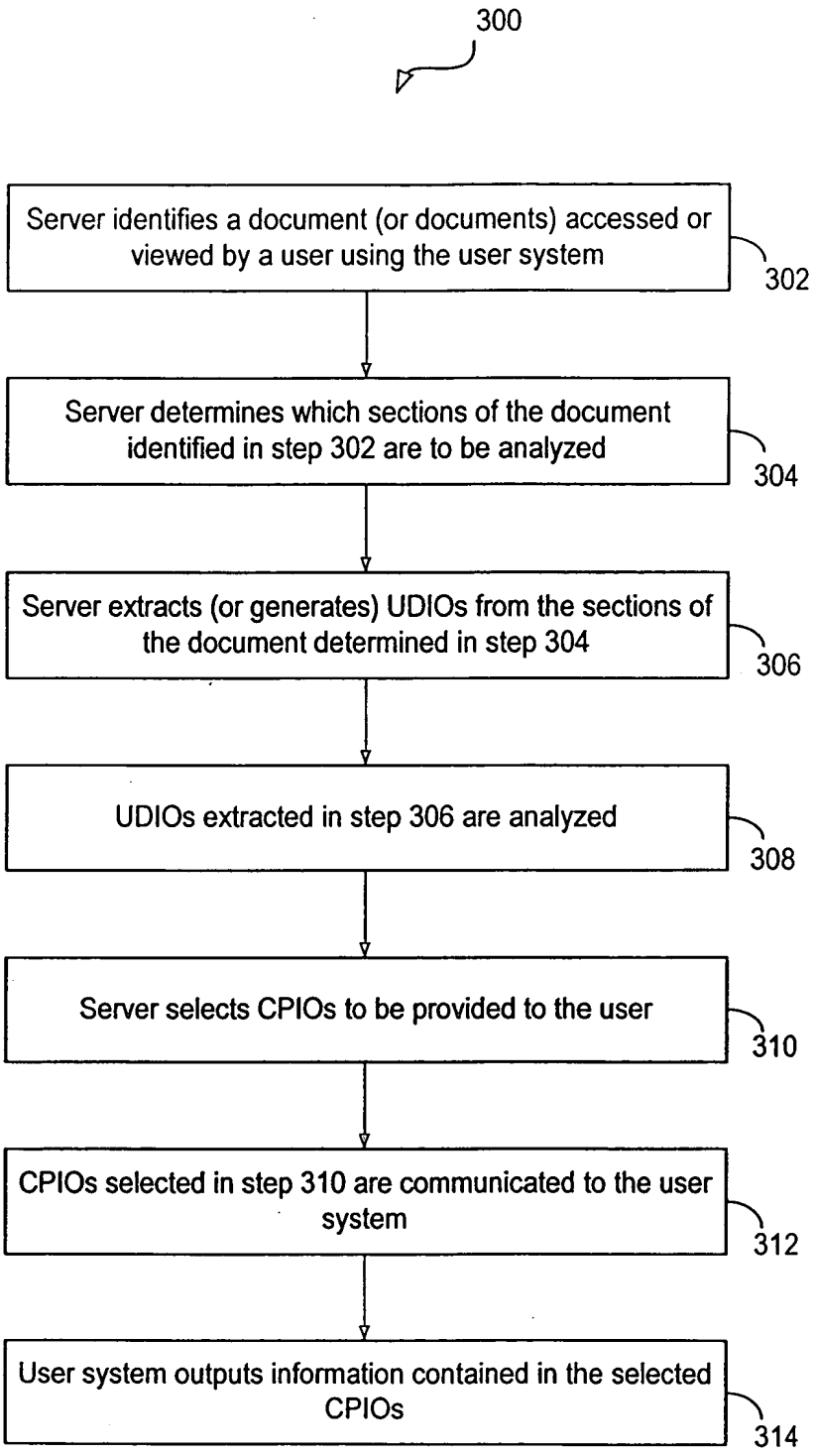

300
Server identifies a document (or documents) accessed or viewed by a user using the user system
302
Server determines which sections of the document identified in step 302 are to be analyzed
304
Server extracts (or generates) UDIOs from the sections of the document determined in step 304
306
UDIOs extracted in step 306 are analyzed
308
Server selects CPIOs to be provided to the user
310
CPIOs selected in step 310 are communicated to the user system
312
User system outputs information contained in the selected CPIOs
314

Fig. 3

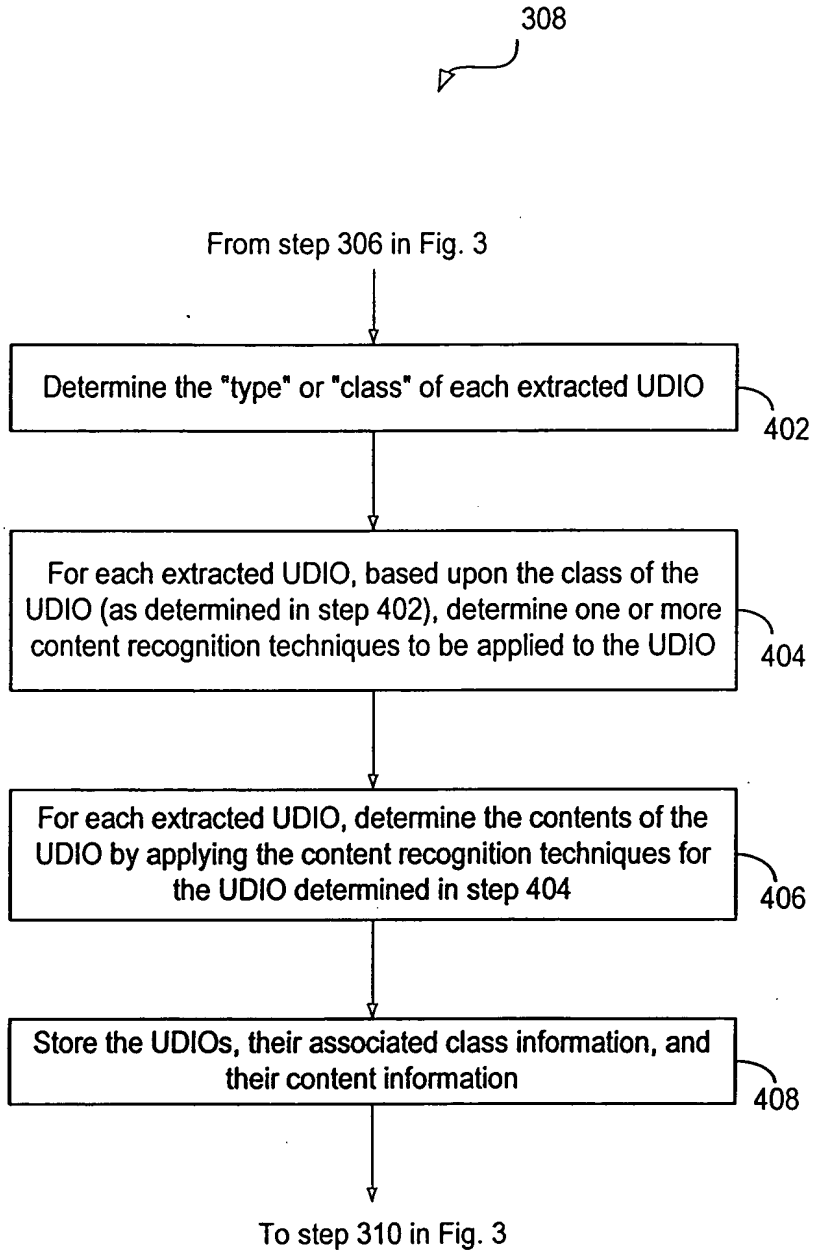

308
From step 306 in Fig. 3
Determine the "type" or "class" of each extracted UDIO
402
For each extracted UDIO, based upon the class of the UDIO (as determined in step 402), determine one or more content recognition techniques to be applied to the UDIO
404
For each extracted UDIO, determine the contents of the UDIO by applying the content recognition techniques for the UDIO determined in step 404
406
Store the UDIOs, their associated class information, and their content information
408
To step 310 in Fig. 3

Fig. 4

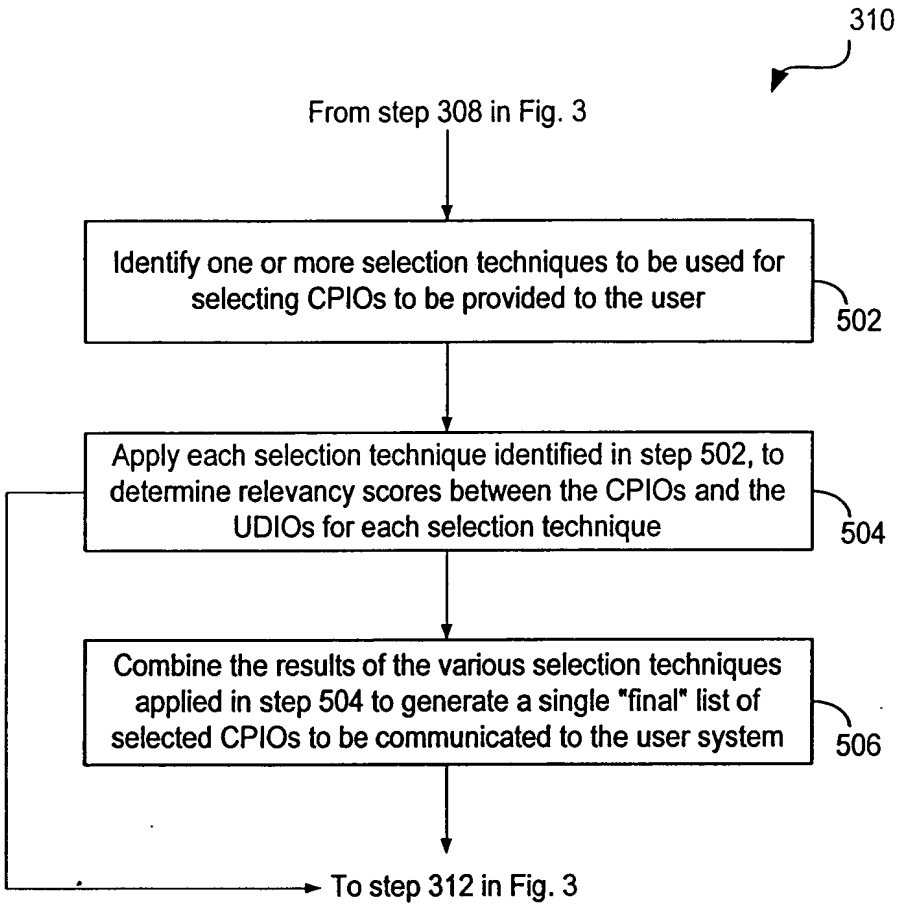

310
From step 308 in Fig. 3
Identify one or more selection techniques to be used for selecting CPIOs to be provided to the user
502
Apply each selection technique identified in step 502, to determine relevancy scores between the CPIOs and the UDIOs for each selection technique
504
Combine the results of the various selection techniques applied in step 504 to generate a single "final" list of selected CPIOs to be communicated to the user system
506
To step 312 in Fig. 3

Fig. 5

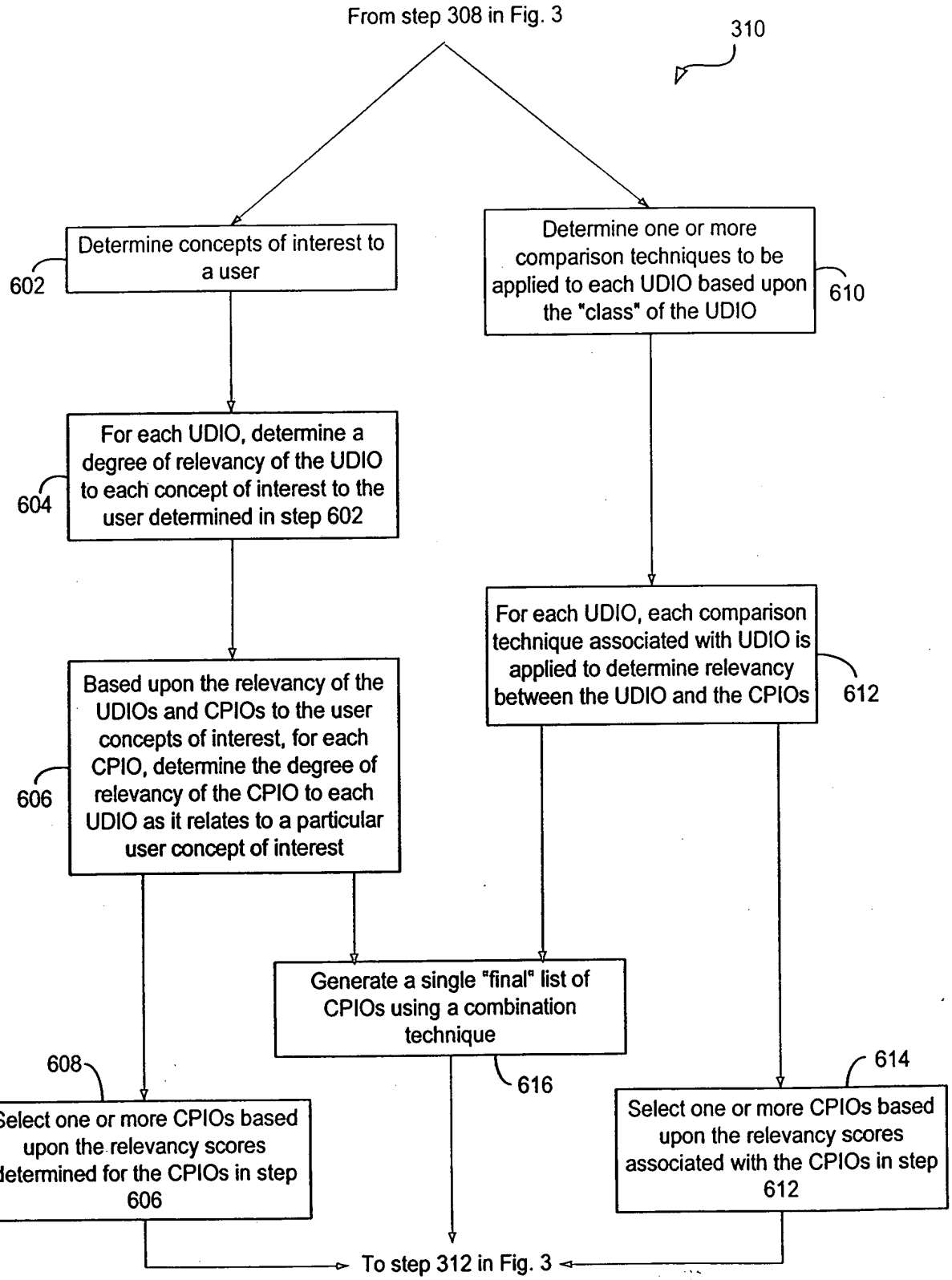

From step 308 in Fig. 3
310
Determine concepts of interest to a user
602
Determine one or more comparison techniques to be applied to each UDIO based upon the "class" of the UDIO
610
For each UDIO, determine a degree of relevancy of the UDIO to each concept of interest to the user determined in step 602
604
For each UDIO, each comparison technique associated with UDIO is applied to determine relevancy between the UDIO and the CPIOs
612
Based upon the relevancy of the UDIOs and CPIOs to the user concepts of interest, for each CPIO, determine the degree of relevancy of the CPIO to each UDIO as it relates to a particular user concept of interest
606
Generate a single "final" list of CPIOs using a combination technique
616
608
Select one or more CPIOs based upon the relevancy scores determined for the CPIOs in step 606
614
Select one or more CPIOs based upon the relevancy scores associated with the CPIOs in step 612
To step 312 in Fig. 3

Fig. 6

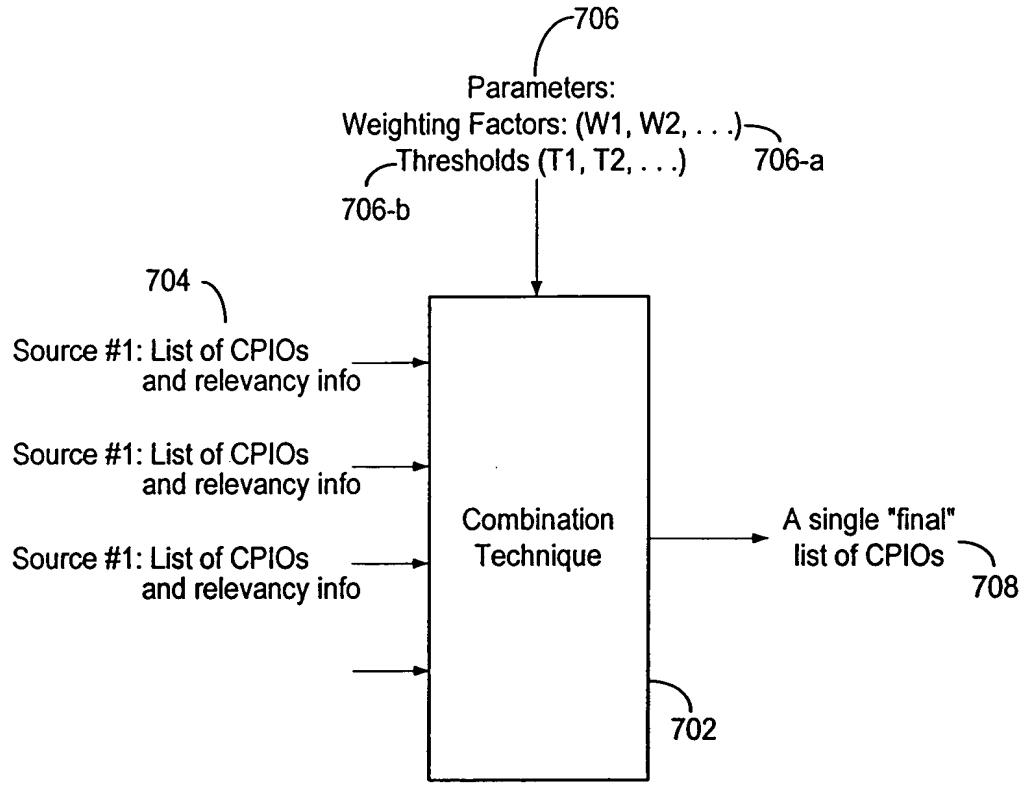

706
Parameters:
Weighting Factors: (W1, W2, . . .)
Thresholds (T1, T2, . . .)
706-a
706-b
704
Source #1: List of CPIOs and relevancy info
Source #1: List of CPIOs and relevancy info
Source #1: List of CPIOs and relevancy info
Combination Technique
A single "final" list of CPIOs
708
702

Fig. 7

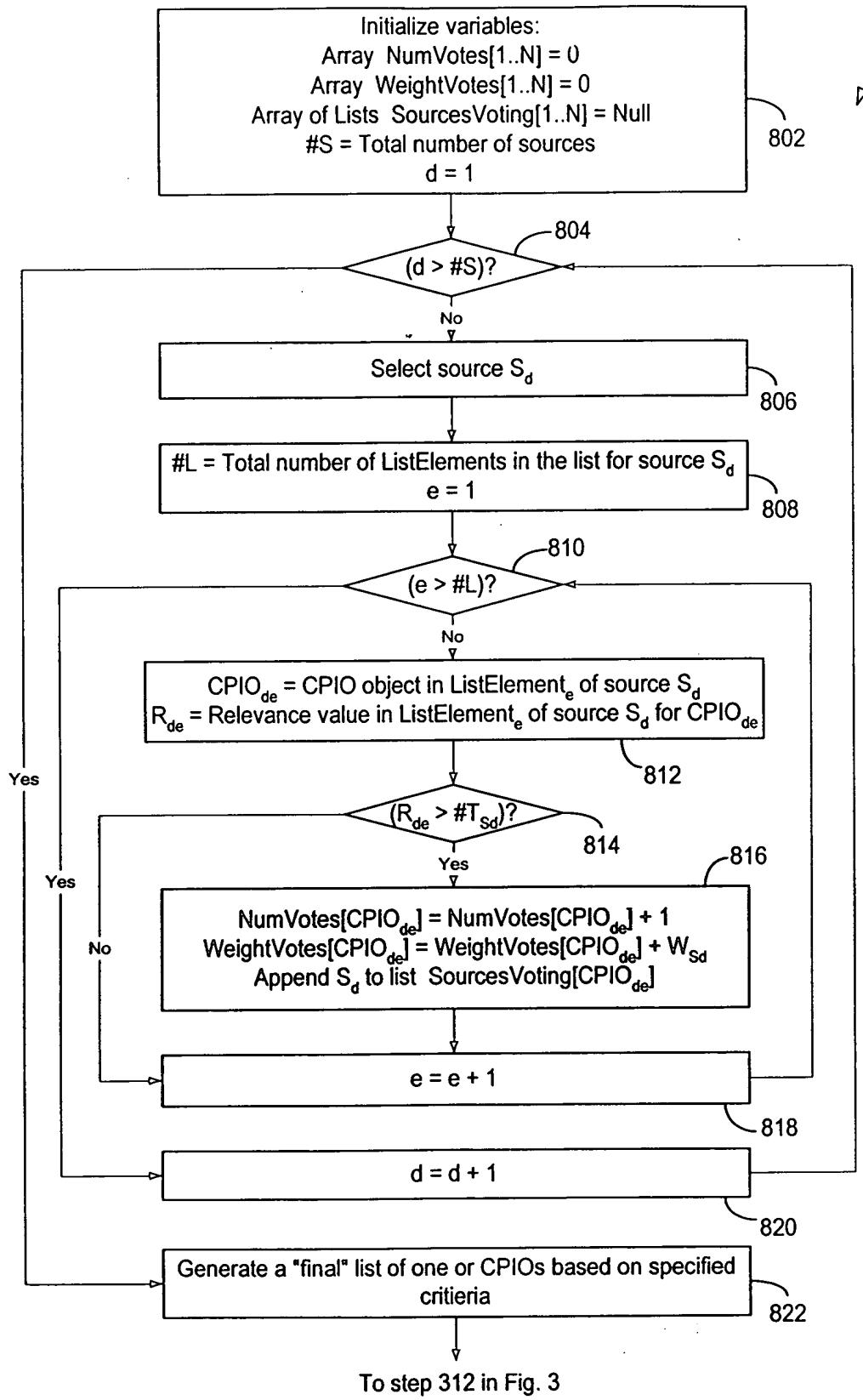
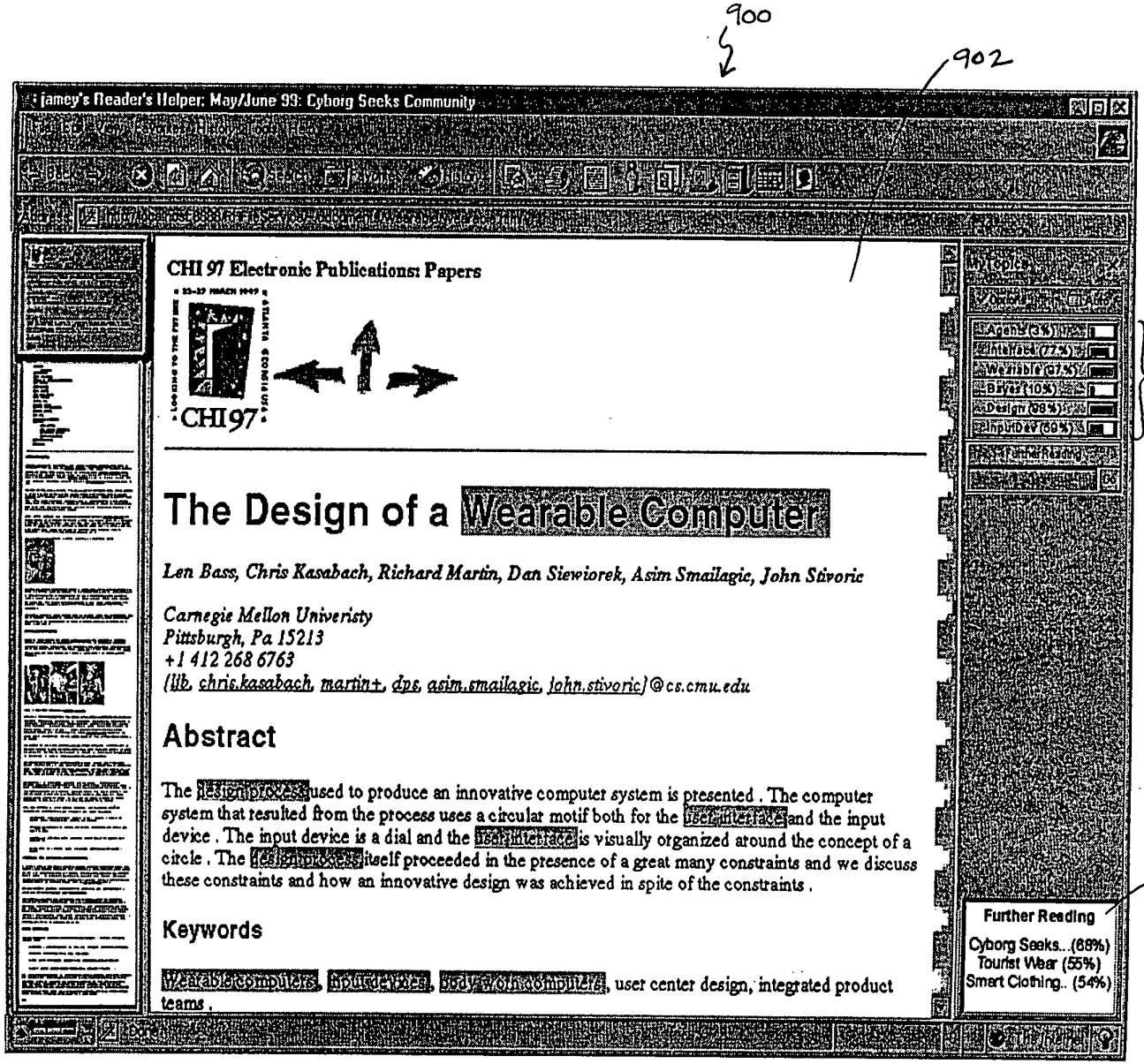

616
Initialize variables:
Array NumVotes[1..N] = 0
Array WeightVotes[1..N] = 0
Array of Lists SourcesVoting[1..N] = Null
#S = Total number of sources
d = 1
802
804
(d > #S)?
No
Select source S_d
806
#L = Total number of ListElements in the list for source S_d
e = 1
808
810
(e > #L)?
No
$CPIO_{de}$ = CPIO object in $ListElement_e$ of source S_d
R_{de} = Relevance value in $ListElement_e$ of source S_d for $CPIO_{de}$
812
Yes
$(R_{de} > \#T_{Sd})$?
814
Yes
816
Yes
No
$NumVotes[CPIO_{de}] = NumVotes[CPIO_{de}] + 1$
$WeightVotes[CPIO_{de}] = WeightVotes[CPIO_{de}] + W_{Sd}$
Append S_d to list SourcesVoting[$CPIO_{de}$]
e = e + 1
818
d = d + 1
820
Generate a "final" list of one or CPIOs based on specified critieria
822
To step 312 in Fig. 3

Fig. 8


900
902
jamey's Reader's Helper: May/June 99: Cyborg Seeks Community
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The Design of a Wearable Computer
Len Bass, Chris Kasabach, Richard Martin, Dan Siewiorek, Asim Smailagic, John Stivoric
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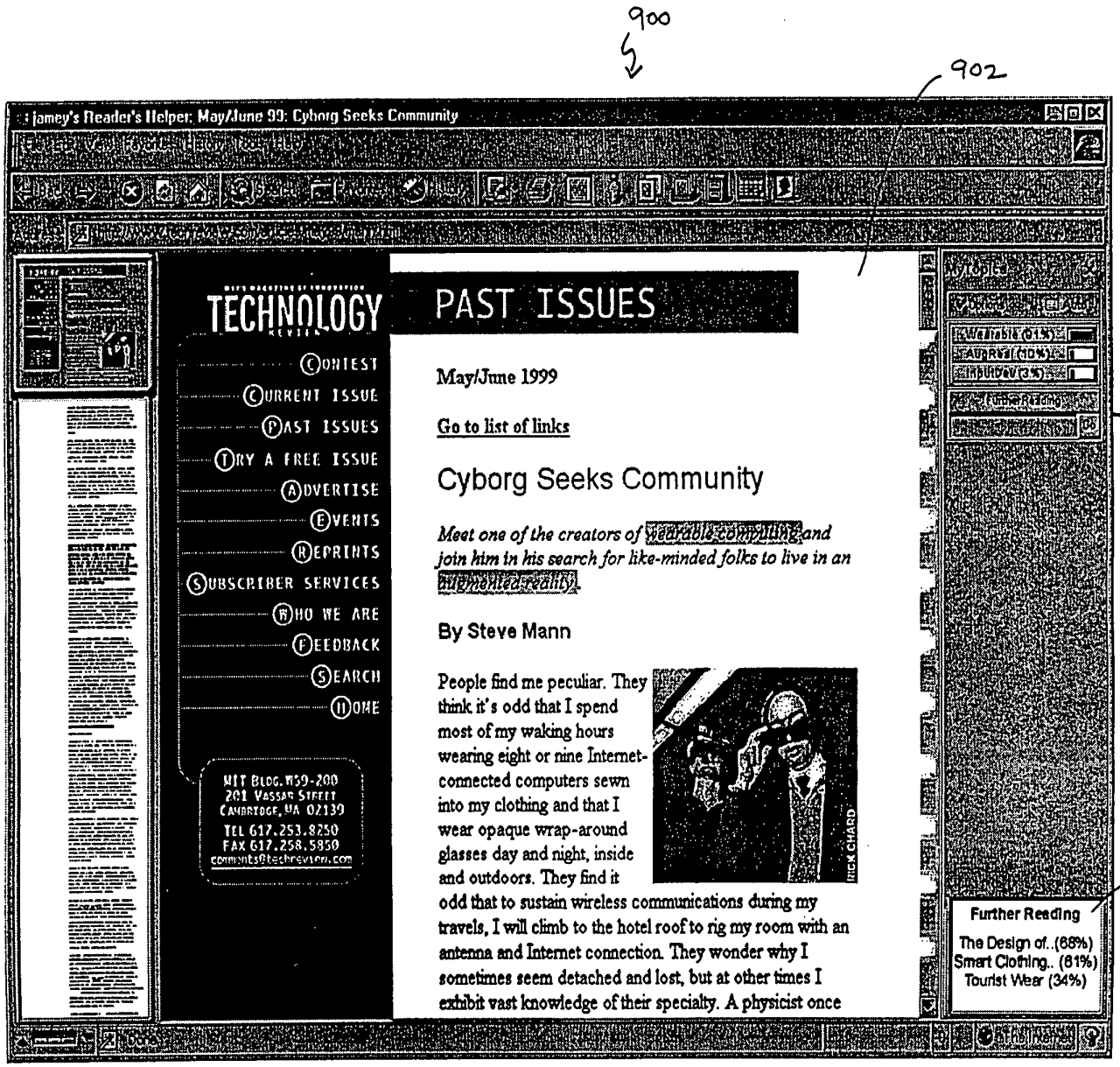
Abstract
The design process used to produce an innovative computer system is presented . The computer system that resulted from the process uses a circular motif both for the user interface and the input device . The input device is a dial and the user interface is visually otganized around the concept of a circle . The design process itself proceeded in the presence of a great many constraints and we discuss these constraints and how an innovative design was achieved in spite of the constraints .
Keywords
Wearable computers, input devices, body worn computers, user center design, integrated product teams .
906
Further Reading
Cyborg Seeks...(69%)
Tourist Wear (55%)
Smart Clothing.. (54%)
904

Fig. 9A


900
902
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904
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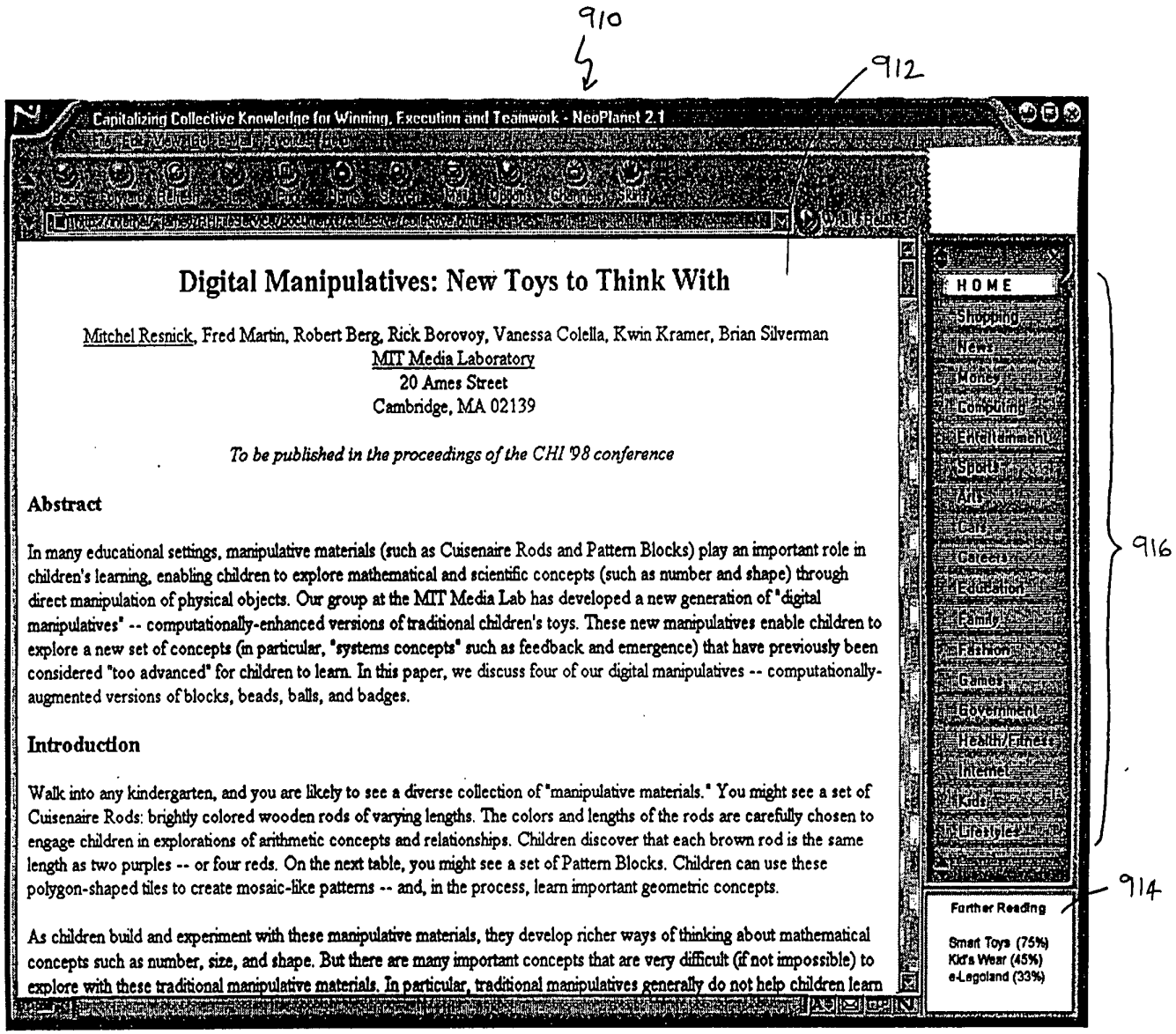
PAST ISSUES
May/June 1999
Go to list of links
Cyborg Seeks Community
Meet one of the creators of wearable computing and join him in his search for like-minded folks to live in an augmented reality.
By Steve Mann
People find me peculiar. They think it's odd that I spend most of my waking hours wearing eight or nine Internet-connected computers sewn into my clothing and that I wear opaque wrap-around glasses day and night, inside and outdoors. They find it odd that to sustain wireless communications during my travels, I will climb to the hotel roof to rig my room with an antenna and Internet connection. They wonder why I sometimes seem detached and lost, but at other times I exhibit vast knowledge of their specialty. A physicist once
RICK CHARD
Further Reading
The Design of..(68%)
Smart Clothing.. (61%)
Tourist Wear (34%)

Fig. 9B


910
912
Capitalizing Collective Knowledge for Winning, Execution and Teamwork - NeoPlanet 2.1
Digital Manipulatives: New Toys to Think With
Mitchel Resnick, Fred Martin, Robert Berg, Rick Borovoy, Vanessa Colella, Kwin Kramer, Brian Silverman
MIT Media Laboratory
20 Ames Street
Cambridge, MA 02139
To be published in the proceedings of the CHI '98 conference
Abstract
In many educational settings, manipulative materials (such as Cuisenaire Rods and Pattern Blocks) play an important role in children's learning, enabling children to explore mathematical and scientific concepts (such as number and shape) through direct manipulation of physical objects. Our group at the MIT Media Lab has developed a new generation of "digital manipulatives" -- computationally-enhanced versions of traditional children's toys. These new manipulatives enable children to explore a new set of concepts (in particular, "systems concepts" such as feedback and emergence) that have previously been considered "too advanced" for children to learn. In this paper, we discuss four of our digital manipulatives -- computationally-augmented versions of blocks, beads, balls, and badges.
Introduction
Walk into any kindergarten, and you are likely to see a diverse collection of "manipulative materials." You might see a set of Cuisenaire Rods: brightly colored wooden rods of varying lengths. The colors and lengths of the rods are carefully chosen to engage children in explorations of arithmetic concepts and relationships. Children discover that each brown rod is the same length as two purples -- or four reds. On the next table, you might see a set of Pattern Blocks. Children can use these polygon-shaped tiles to create mosaic-like patterns -- and, in the process, learn important geometric concepts.
As children build and experiment with these manipulative materials, they develop richer ways of thinking about mathematical concepts such as number, size, and shape. But there are many important concepts that are very difficult (if not impossible) to explore with these traditional manipulative materials. In particular, traditional manipulatives generally do not help children learn
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e-Legoland (33%)

Fig. 9C